

REMARKS

Claims 1 - 36 are pending. Claims 1, 2, 9 - 13, 15, and 21 - 23 have been amended. New claims 24 - 36 have been added. No new matter has been introduced. Reexamination and reconsideration of the present application are respectfully requested.

In the Final Office Action dated December 13, 2002, the Examiner rejected to claim 2 under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner objected to claims 7 and 8 as being multiple dependent claims from claims 3 and 4. The Examiner rejected to claims 1 - 12, 15, and 18 - 20 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,792,971 to Timis et al. (the Timis reference). The Examiner rejected claims 16 - 17 under 35 U.S.C. § 103(a) as being obvious in view of the Timis reference and further in view of U.S. Patent No. 6,314,326 to Fuchu (the Fuchu reference). The Examiner reject claims 13, 14, and 21 - 23 under 35 U.S.C. § 103(a) as being obvious in view of U.S. Patent No. 5,524,060 to Silfvajt et al (the Silfvajt reference) and further in view of the Timis reference.

In response to the Examiner's rejection of claim 2 under 35 U.S.C. § 112, second paragraph, Applicants cannot find the phrase "or the like" in claim 2. Accordingly, applicants respectfully submit the Examiner's rejection is not applicable to claim 2.

In response to the Examiner's objections that claims 7 and 8 are in improper form for multiple dependent claims, Applicants submit that claim 7 is directly dependent only from claim 3 and claim 8 is directly dependent only from claim 4. Thus, claims 7

and 8 are not multiple dependent claims. Accordingly, applicants submit that the Examiner's objection has been overcome.

The present invention relates to a system interconnecting a computer and an audio device, which may operate independently of each other. The computer and the audio device may cooperate with each other so that computer audio data supplied from the computer are sent to the audio device via a serial bus such as the Universal Serial Bus (USB) and are reproduced in the audio device even if the audio device selects a source other than the computer. The audio device may be an audio component stereo system providing at least one audio source such as a tuner or a recording media, which provides the audio source audio data. The audio device performs mixing between the audio source audio data and the computer audio data based on control data. Speakers produce sounds based on the mixing results.

Independent claim 1, as amended, recites:

An audio system comprising:

an audio device;

a computer for creating computer audio data and control data for operating the audio device; and

data transmission means for linking the audio device and the computer together to transmit data therebetween;

wherein said computer has an output for outputting the computer audio data and the control data to the audio device via the data transmission means,

and wherein said audio device includes

a first system portion for processing audio source audio data that is provided by an audio source other than the computer,

a second system portion for *processing the computer audio data created by the computer*, and

mixing means for performing mixing of the audio source audio data and the computer audio data, which are respectively processed by the first and second system portions.

The Timis reference is directed to a method and apparatus for editing digital audio information, such as music material. The Timis reference includes a computer system to perform the editing, based on comparison of a first set of control codes associated with the source program and a second set of control codes preselected to represent an editorial change. The computer system 1 includes a monitor 3, a cabinet 7, a keyboard 9, and a mouse 11. The cabinet 7 houses a floppy disk drive 17, a CD-ROM drive 19, and a hard drive that may be utilized to store and retrieve audio information and software programs including the present invention. The cabinet 7 houses A/D and D/A converters. A microphone 152 connects to the A/D converters to provide audio information. A D/A converter connects to the amplified speakers 162. A MIDI interface connects to a serial or I/O portion of the computer system and the connection may be bi-directional. The sound output of the MIDI device 180 connects to amplified speakers 162 where it is mixed with the sound output of the D/A converters; optionally a mixer may be used. (Col. 5, line 58 - Col. 6, line 20; Fig. 1).

In a preferred embodiment, A/D converters 150 can receive analog audio data from the microphone 152 or other analog sound source, convert it into digital samples,

and send these samples through bus 122 to a system memory 104, a disk drive 116, or other interface subsystems. D/A converters 160 convert digital samples received from the system memory 104, disk drive 116, or other interface subsystems via the bus 122 into analog sound data, then output the analog data to the amplified speakers 162. The MIDI interface can 1) receive user input from a MIDI device and redirect the MIDI data through the bus 122 to other subcomponents of the system and 2) receive data via bus 122 and output MIDI data to the synthesizer part of the MIDI device 180. The analog output of keyboard/synthesizer part of the MIDI device 180 is amplified and output via amplified speakers. (*Col. 6, lines 49 - 63; Fig. 3*).

In an alternative embodiment, audio may enter a processor unit 200 from a sound input device, e.g., a microphone, and the audio may be converted to digital samples by A/D converters 150. An analysis unit 202 extracts musical parameters from the converted digital samples. Notes and other musical parameters may be entered from a MIDI input device 180 or a MIDI slider 182 and represent a user's musical intention. A controller unit 206 compares the parameters generated by analysis unit 202 with one entered through the MIDI input device 180 or MIDI slider 182 and time varying control functions are generated. The digitized samples from A/D converters 150 are input to the processing unit which uses the time varying functions generated by the controller unit as control parameters for the digitized samples. The resulting digital samples are converted to an analog signal by D/A converters 160. The resulting analog signal is sent to the sound output device 162. Resulting sound has many characteristics of the original sound but some of the musical parameters correspond to

parameters input by the MIDI input device 180 and the MIDI slider. (Col. 7, line 64 - col. 7, line 26; Fig. 3).

The Timis reference does not disclose, teach, or suggest the system of independent claim 1, as amended. Unlike independent claim 1, as amended, the Timis reference does not disclose an audio system including: an audio device; *a computer for creating computer audio data and control data for operating the audio device*; and data transmission means for linking the audio device and the computer together to transmit data therebetween; wherein said computer has an output for outputting the computer audio data and the control data to the audio device via the data transmission means, and wherein said audio device includes a first system portion for processing audio source audio data that is provided by an audio source other than the computer, a second system portion for *processing the computer audio data created by the computer*, and mixing means for performing mixing of the audio source audio data and the computer audio data, which are respectively processed by the first and second system portions.

Instead, the Timis reference, regardless of whether the processor unit is in the computer system or is part of the user input device, only discloses a computer system that is a conduit for music input from a sound input device. This system is not the same as an audio system including an audio device and a computer for *creating computer audio data and control data for operating the audio device*; and data transmission means for linking the audio device and the computer together to transmit data therebetween. The computer system of the Timis reference, in either embodiment, does not create *computer audio data and control data for operating the audio device*, as

recited in independent claim 1, as amended, because it is just a conduit for music input for a sound player. Accordingly, applicants respectfully submit that independent claim 1, as amended, distinguishes over the Timis reference.

Independent claim 1, as amended, further distinguishes over the Timis reference. Unlike the audio system of claim 1, the Timis reference does not disclose an audio system including: an audio device; a computer for creating computer audio data and control data for operating the audio device; and data transmission means for linking the audio device and the computer together to transmit data therebetween; wherein said computer has an output for outputting the computer audio data and the control data to the audio device via the data transmission means, and where said computer has an output for outputting the computer audio data and the control data to the audio device via the data transmission means, and wherein said audio device further comprises a first system portion for processing audio source audio data that is provided by an audio source other than the computer, *a second system portion for processing the computer audio data created by the computer*, and mixing means for performing mixing of the audio source audio data and the computer audio data, which are respectively processed by the first and second system portions.

Instead, if the CD 19 is the audio device, as set forth by the Examiner on pages 3, 4, 5 of the Office Action, the Timis reference's audio device does not *process the computer audio data* created by the computer, as recited in independent claim 1, as amended, at all because the CD cannot process the computer audio data, it can only store the computer audio data. Alternatively, if the MIDI device 180 is the audio device, as set forth by the Examiner on pages 6 and 8, the MIDI device only receives MIDI

codes from the computer through the MIDI interface. This is not the same as an audio system including an audio device including a second system portion *for processing the computer audio data created by the computer*, as recited in independent claim 1, as amended, because MIDI codes are musical notations, whereas computer audio data are samples of the actual sound waveforms. Accordingly, applicants respectfully submit that claim 1, as amended, further distinguishes over the Timis reference

The Fuchu reference does not make up for the deficiencies of the Timis reference. The Fuchu reference is directed to an apparatus for controlling one or more pieces of external electronic equipment connected to an electronic equipment control apparatus by a communications line. The electronic equipment control apparatus includes communications means for communicating with said pieces of external electronic equipment through said communication lines, control means for controlling operations to request said pieces of external electronic equipment to transmit user interface information for controlling said pieces of external electronic equipment to said electronic equipment control apparatus, and storage means for storing said user interface information transmitted by said pieces of external electronic equipment through said communications line. (*Col. 2, lines 25 - 40*). The AV system includes a personal computer module 1, an MPEG1 video deck module 2, a CD-ROM changer module 3, a DVD-ROM/movie player module 4, and a device-bay module 5, which are connected to each other by IEEE 1394 cables. The PC module 1 exchanges control video and audio signals with the AV equipment having functions conforming to the IEEE-1394 specifications such as the MPEG1 video deck module 2, the CD-ROM changer module 3, the DVD-ROM/movie player module 4, and the device-bay module 5

through the 1394 cables 6. The PC module 1 is capable of controlling the AV equipment in accordance with three types of specifications, i.e., Control S, Control A1, and Local Application Control Bus Systems (LANC). (*Col. 5, line 30 - col. 6, line 67*).

The Fuchu reference does not disclose, teach, or suggest the system of independent claim 1, as amended. Unlike independent claim 1, as amended, the Fuchu reference does not disclose an audio system including: an audio device; a *computer for creating computer audio data and control data for operating the audio device*; and data transmission means for linking the audio device and the computer together to transmit data therebetween; wherein said computer has an output for outputting the computer audio data and the control data to the audio device via the data transmission means, and where said computer has an output for outputting the computer audio data and the control data to the audio device via the data transmission means, and wherein said audio device further comprises a first system portion for processing audio source audio data that is provided by an audio source other than the computer, a second system portion for processing the computer audio data created by the computer, and mixing means for performing mixing of the audio source audio data and the computer audio data, which are respectively processed by the first and second system portions..

Instead, the Fuchu reference, discloses sending of control information to the AV equipment in accordance with three kinds of specifications, i.e., Control S, Control A1, and LANC (Local Application Control Bus System) and does not disclose computer audio data created by the computer being transmitted to the AV equipment. (*Col. 6, line 45 - col. 7, line 4; Fig. 3*). This is not the same as an audio system including an

audio device and *a computer for creating computer audio data and control data for operating the audio device*; and data transmission means for linking the audio device and the computer together to transmit data therebetween because the computer system does not create *computer audio data and control data for operating the audio device*, as recited in independent claim 1, as amended, because it only transmits the control data for operating the audio device and does not transmit computer created audio data. Accordingly, applicants respectfully submit that claim 1 distinguishes over the Fuchu reference, alone or in combination with the Timis reference.

Claim 1 further distinguishes over the Fuchu reference. Unlike the audio system of claim 1, the Fuchu reference does not disclose an audio system including: an audio device; a computer for creating computer audio data and control data for operating the audio device; and data transmission means for linking the audio device and the computer together to transmit data therebetween; wherein said computer has an output for outputting the computer audio data and the control data to the audio device via the data transmission means, and where said computer has an output for outputting the computer audio data and the control data to the audio device via the data transmission means, and wherein said audio device further comprises a first system portion for processing audio source audio data that is provided by an audio source other than the computer, *a second system portion for processing the computer audio data created by the computer*, and mixing means for performing mixing of the audio source audio data and the computer audio data, which are respectively processed by the first and second system portions.

Instead, the PC of the Fuchu reference outputs a command to an audio device, i.e., electronic equipment apparatus, to control the function of the electronic equipment apparatus. In addition, the Fuchu reference PC retrieves information from the electronic equipment apparatus, i.e., audio device, but the electronic equipment apparatus does not receive computer audio data. This is not the same as an audio system, including a computer and an audio device, the audio device further includes a second system portion for processing the computer audio data created by the computer because computer audio data is not created by the Fuchu reference PC so it cannot be processed by a second system portion. Accordingly, applicants respectfully submit that claim 1, as amended, further distinguishes over the Fuchu reference, alone or in combination with the Timis reference.

Independent claims 2, 11, 12, and 15, all as amended, recite limitations similar to independent claim 1, as amended. Accordingly, applicants respectfully submit that independent claims 2, 11, 12, and 15 distinguish over the above-cited references for the reasons set forth above with respect to independent claim 1, as amended.

Dependent claims 3 - 8, 16 - 20, 27 - 30, and 32 depend directly or indirectly from independent claims 1, 2, 11, 12, and 15, respectively. Accordingly, applicants respectfully submit that dependent claims 3 - 8, 16 - 20, 27 - 30, and 32 distinguish over the above-cited references for the reasons set forth with respect to independent claim 1, as amended.

Independent claim 9, as amended, recites:

An audio device comprising
at least one audio source;

a digital interface for inputting computer audio data supplied
from a computer,

audio processing means for processing audio source audio
data provided by the audio source and the computer audio data provided
by the computer;

digital mixing means for performing digital mixing between
the audio source audio data processed by the audio processing means
and the computer audio data; and

speaker means for producing sound based on output of the
mixing means.

The Timis reference does not disclose, teach, or suggest the system in claim 9, as amended. Unlike the system in claim 9, as amended, the Timis reference does not disclose an audio device including at least one audio source, *a digital interface for inputting computer audio data supplied from a computer*, audio processing means for processing audio source audio data provided by the audio source and the computer audio data provided by the computer, *digital mixing means for performing digital mixing between the audio source audio data processed by the audio processing means and the computer audio data*; and speaker means for producing sound based on output of the mixing means.

Instead, the Timis reference discloses an audio device, i.e., the MIDI interface 170 and MIDI device 180, that receives analog audio information output from the digital-to-analog converter 160 of the computer system 1. This is not the same as an audio device including a digital interface *for receiving computer audio data supplied from a computer* because the computer of the Timis reference outputs analog information to

the audio device and thus the audio device must have an analog interface.

Accordingly, applicants respectfully submit that claim 9, as amended, distinguishes over the Timis reference.

Independent claim 9, as amended, further distinguishes over the Timis reference. Unlike the audio device in independent claim 9, as amended, the Timis reference does not disclose an audio device including at least one audio source, a digital interface for inputting computer audio data supplied from a computer, audio processing means for processing audio source audio data provided by the audio source and the computer audio data provided by the computer, *digital mixing means for performing digital mixing between the audio source audio data processed by the audio processing means and the computer audio data*; and speaker means for producing sound based on output of the mixing means.

Instead, the Timis reference discloses the mixing of sound from the MIDI device along with sound output from the digital-to-analog converter. (*Col. 6, lines 19 - 22*). This is not the same as an audio device including *digital mixing means for performing digital mixing between the audio source audio data processed by the audio processing means and the computer audio data*, as recited in independent claim 9, as amended, because the Timis reference mixing is performed on analog data and not digital data. Accordingly, applicants respectfully submit that the independent claim 9, as amended, distinguishes over the Timis reference.

Independent claims 10 and 11, both as amended, include limitations similar to independent claim 9, as amended. Accordingly, applicants respectfully submit that

independent claims 10 and 11 distinguish over the above-cited references for the reasons set forth above with respect to independent claim 9, as amended.

Dependent claims 27 - 36 include limitations similar to independent claim 9, as amended. Accordingly, applicants respectfully submit that dependent claims 27 - 36 distinguish over the above-cited references for the reasons set forth above with respect to independent claim 9, as amended.

Claim 13, as amended, recites:

An audio system, comprising:

an audio device for producing first audio data in connection with at least one audio source,

external serial bus means, and

a personal computer, for creating second audio data and control data,

wherein the audio device further includes selection means for selecting one of the first audio data and the second audio data, which is transmitted thereto via an external serial bus means, first digital-to-analog conversion means for converting output of the signal processing means to first analog signals, second digital-to-analog conversion means for converting the second audio data from the personal computer to second analog signals, and analog mixing means for performing analog mixing between the first analog signals and the second analog signals, whereby speaker means produces sounds based on the result of the analog mixing.

The Silfvajt reference relates to a variable gain-amplifier for receiving an input audio signal, applying a gain, and providing an output audio signal. More specifically, the Silfvajt reference discloses management of an operator interface subsystem by a PC-compatible microcomputer connected to an audio mixer system via a serial link. The PC-compatible microcomputer is connected to an amplifier unit, dedicated to digital signal processing, via a second serial link. (*Col. 9, lines 26 - 35*). The invention includes an audio mainframe for receiving, processing, and mixing, and outputting the audio signals through digitally controllable analog audio control devices contained in the audio mainframe. (*Col. 2, lines 58 - 63*). Each channel of the audio mixer system has a plurality of inputs which may be summed and routed through an input amplifier, and the final product, a conditioned mix of the input signal, may also be passed through an amplifier before being routed to output equipment. The amplifier used in the Silfvajt reference may be a module separate from the console which includes the audio mixer. (*Col. 5, lines 36 - 39*).

The Silfvajt reference does not disclose, teach, or suggest the system in claim 13, as amended. Unlike the system in claim 13, as amended, the Silfvajt reference does not disclose an audio system, including an audio device for producing first audio data in connection with at least one audio source, external serial bus means, and a *personal computer, for creating second audio data and control data*, wherein the audio device further includes selection means for selecting one of the first audio data and the second audio data, which is transmitted thereto via an external serial bus means, first digital-to-analog conversion means for converting output of the signal processing means to first analog signals, second digital-to-analog conversion means for converting

the second audio data from the personal computer to second analog signals, and analog mixing means for performing analog mixing between the first analog signals and the second analog signals, whereby speaker means produces sounds based on the result of the analog mixing.

Instead, the Silfvajt reference discloses a computer console that inputs analog electric control signals and displays control status and signal characteristics, including signal routing. The invention also includes a microprocessor-based control system coupled to the console for receiving the analog electric control signals, converting them to digital data, storing and retrieving the data, and for controlling the transfer of data between the console and the audio mainframe. (*Col. 4, line 28 - col. 5, line 30*). This is not the same as an audio system including a personal computer for creating second audio data and control data because the computer of the Silfvajt reference does not create computer audio data at all. Instead, it only transmits control signals to a microprocessor-based control system to convert the control signals from analog to digital signals. Accordingly, applicants respectfully submit that claim 13, as amended, distinguishes over the Silfvajt reference.

The Timis reference does not make up for the deficiencies of the Silfvajt reference. Unlike the audio device of independent claim 13, as amended, the Silfvajt does not disclose an audio system, including: an audio device for producing first audio data in connection with at least one audio source, external serial bus means, and *a personal computer, for creating second audio data and control data*, wherein the audio device further includes selection means for selecting one of the first audio data and the second audio data, which is transmitted thereto via an external serial bus means, first

digital-to-analog conversion means for converting output of the signal processing means to first analog signals, second digital-to-analog conversion means for converting the second audio data from the personal computer to second analog signals, and analog mixing means for performing analog mixing between the first analog signals and the second analog signals, whereby speaker means produces sounds based on the result of the analog mixing.

As discussed previously, the computer of the Timis reference does not create second audio data and thus, it is not the same as an audio system including a personal computer for creating second audio data and control data. Accordingly, applicants respectfully submit that claim 13, as amended, distinguishes over the Timis reference, alone or in combination with the Silfvajt reference.

Independent claims 21, 22, 23, all as amended, and independent claim 24 all recite limitations similar to claim 13, as amended. Accordingly, applicants respectfully submit that independent claims 21, 22, and 23, and 24 distinguish over the above-cited references for the reasons set forth above with respect to independent claim 13, as amended.

Dependent claims 14, 31, and 33 - 36 depend directly on claims 13, and 21 - 24, respectively. Accordingly, applicants respectfully submit that dependent claims 14, 31, and 33 - 36 distinguish over the above-cited reference for the reasons set forth above with respect to independent claim 13, as amended.

New independent claim 25 recites:

A control method for an audio device, comprising:

creating a graphic user interface for controlling the audio device to allow selection of an audio source with respect to an audio device and to allow mixing of audio data of the selected audio source together with other audio data created by a computer;

outputting control data to the audio device based on the operation of the graphical user interface;

receiving information regarding the operation of the graphical user interface as the control data, and providing the control data to the graphical user interface; and

outputting the audio data to the audio device.

The Timis reference does not disclose, teach, or suggest the method in claim 25, as amended. Unlike the system in claim 25, the Timis reference does not disclose a control method for an audio device, including creating a graphic user interface for controlling the audio device, to allow selection of an audio source with respect to an audio device and *to allow mixing of audio data of the selected audio source together with other digital audio data created by a computer*, outputting control data to the audio device based on the operation of the graphical user interface; receiving information regarding the operation of the graphical user interface as the control data, and providing the control data to the graphical user interface; and outputting the audio data to the audio device.

Instead, the Timis reference teaches a computer that digitizes a received analog sound sample, extracts musical parameters from the digitized sound sample, utilizes notes and other parameters supplied from user editing or from other devices, and

processes the digitized sound sample according to the notes or other parameters. (*Col. 6, lines 49 - 63; col. 7, line 1 26*). This is not the same as a control method for an audio device including creating a graphic user interface for controlling the audio device to allow selection of an audio source with respect to an audio device and *to allow mixing of audio data of the audio source together with other digital audio data created by a computer*, as recited in independent claim 25, because the Timis reference does not disclose a graphical user interface. Further, the Timis reference computer is not mixing audio data of the audio source together with other digital audio data created by the computer because it is processing digitized sound samples according to notes and other parameters, which is not the same as mixing two sources of audio data together. Accordingly, applicants respectfully submit that claim 25 distinguishes over the Timis reference.

The Fuchu reference does not make up for the deficiencies of the Timis reference. Unlike new claim 25, the Fuchu reference does not disclose a control method for an audio device, including creating a graphic user interface for controlling the audio device, to allow selection of an audio source with respect to an audio device and *to allow mixing of audio data of the selected audio source together with other digital audio data created by a computer*, outputting control data to the audio device based on the operation of the graphical user interface; receiving information regarding the operation of the graphical user interface as the control data, and providing the control data to the graphical user interface; and outputting the audio data to the audio device.

Instead, the Fuchu reference discloses a computing device that transmits control parameters to an audio device and receives audio or video data from the audio device,

e.g., DVD ROM, wherein it then displays the video data and transmits the audio data to speakers. (*Col. 12, line 55 - col. 13, line 36*). This is not the same as a control method for an audio device including creating a graphic user interface for controlling the audio device, to allow selection of an audio source with respect to an audio device and *to allow mixing of audio data of the audio source together with other digital audio data created by a computer*, as recited in new claim 25, because the Fuchu reference does not disclose the computer creating any digital audio data, it is just a conduit for the audio device, nor does the Fuchu reference disclose mixing data of the audio source together with the digital audio data created by the computer. Accordingly, applicants respectfully submit that claim 25 distinguishes over the Fuchu reference, alone or in combination, with the Timis reference.

The Silfvajt reference does not make up for the deficiencies of the Timis reference and the Fuchu reference. Unlike claim 25, the Silfvajt reference does not disclose a control method for an audio device, including creating a graphic user interface for controlling the audio device, to allow selection of an audio source with respect to an audio device and *to allow mixing of audio data of the selected audio source together with other digital audio data created by a computer*, outputting control data to the audio device based on the operation of the graphical user interface; receiving information regarding the operation of the graphical user interface as the control data, and providing the control data to the graphical user interface; and outputting the audio data to the audio device.

Instead, the Silfvajt reference discloses a mixing system including a control mainframe, i.e., computer and control hardware components and an audio mainframe,

wherein all of the audio signals to be processed and mixed go to, are processed by, and are output from the audio mainframe. The control mainframe generates digital control signals to control the digitally controllable analog audio control devices. (*Col. 2, line 58 - col. 3, line 8; col. 4, lines 28 - 46*). This is not the same as a control method for an audio device including creating a graphic user interface for controlling the audio device, to allow selection of an audio source with respect to an audio device and *to allow mixing of audio data of the audio source together with other digital audio data created by a computer*, as recited in independent claim 25, because no digital audio data is created by the computer of the Silfvajt reference, only control data is created, and thus the system may not allow mixing of the audio data of the audio source together with other digital audio data created by a computer. Accordingly, applicants respectfully submit that claim 25 distinguishes over the Silfvajt reference, alone or in combination with the Timis and the Fuchu references.

Independent claim 26 recites limitations similar to the independent claim 25. Accordingly, applicants respectfully submit that independent claim 26 distinguishes over the above-cited references for the reasons set forth above with respect to independent claim 25.

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Applicants believe that the foregoing amendments place the application in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call either of the undersigned attorneys at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.


Respectfully submitted,

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 24 - 36 have been added. Claims 1, 2, 9 - 13, 15, and 21-23 have been amended, as follows:

1. (Twice Amended) An audio system comprising:

an audio device;

a computer for creating computer audio data and control data for
operating the audio device; and

data transmission means for linking the audio device and the computer
together to transmit data therebetween,

wherein said computer has an output for outputting the computer audio
data and the control data to the audio device via the data transmission means,

and wherein said audio device includes

a first system portion for processing audio source audio data that is
provided by an audio source other than the computer,

a second system portion for processing the computer audio data [from]
created by the computer, and

mixing means for performing mixing of the audio source audio data and the
computer audio data, which are respectively processed by the first and second sound
system portions.

2. (Twice Amended) An audio system comprising:

an audio device;

a computer for creating computer audio data and control data for operating the audio device; and

data transmission means for linking the audio device and the computer together to transmit data therebetween,

wherein said computer has an output for outputting the computer audio data and the control data to the audio device via the data transmission means,

and wherein said audio device includes

a first system portion for performing signal processing on the computer audio data from the computer, or for performing the signal processing on audio source audio data of an audio source different from the computer audio data, or the audio source audio data selectively provided by one of a plurality of audio sources different from the computer,

a second system portion for performing simple signal processing, which is simple as compared with the signal processing of the first system portion, on the computer audio data [from] created by the computer,

mixing means for performing mixing of the audio source audio data and the computer audio data, which are respectively processed by the first and second system portions, and

means for turning off the mixing of the mixing means when the first system portion performs the signal processing selectively on the computer audio data of the computer.

9. (Twice Amended) An audio device comprising
at least one audio source;

a[n] digital interface for inputting computer audio data supplied from a computer,

audio processing means for processing audio source audio data provided by the audio source and the computer audio data provided by the computer;

digital mixing means for performing digital mixing between the audio source audio data processed by the audio processing means and the computer audio data; and

speaker means for producing sound based on output of the mixing means.

10. (Twice Amended) An audio device comprising:

input means for inputting audio source audio data supplied from an audio source different from a computer;

a[n] digital interface for inputting computer audio data supplied from the computer;

digital mixing means for performing digital mixing between the audio source audio data input by the input means and the computer audio data which is input thereto via the interface; and

speaker means for producing sound based on output of the mixing means.

11. (Twice Amended) A machine readable media for storing an audio control program that causes a computer to actualized an audio control system comprising:

graphical user interface means for operating the audio device, the graphical user interface means actualizing an operation to select an audio source for the audio device and an operation to perform mixing on audio source audio data of the selected audio source and computer audio data created and provided by the computer;

means for outputting control data to the audio device via an external serial bus means on the basis of operation of the graphical user interface means;

means for receiving information regarding operation of the audio device as the control data via the external serial bus means so as to reflect the control data in content of graphical user interface; and

means for outputting the computer audio data to the audio device via the external serial bus means.

12. (Twice Amended) An audio system, comprising:
an audio device for producing first audio data in connection with at least one audio source,

external serial bus means, and

a personal computer, for [producing] creating second audio data and control data,

wherein the audio device performs mixing between the first audio data and the second audio data, which is transmitted thereto via the external serial bus means, on the basis of the control data, so that speaker means produces sound based on mixing results.

13. (Twice Amended) An audio system, comprising:

an audio device for producing first audio data in connection with at least

one audio source,

external serial bus means, and

a personal computer, for [producing] creating second audio data and control data,

wherein the audio device further includes selection means for selecting one of the first audio data and the second audio data, which is transmitted thereto via an external serial bus means, signal processing means for performing signal processing on output of the selection means, first digital-to-analog conversion means for converting output of the signal processing means to first analog signals, second digital-to-analog conversion means for converting the second audio data from the personal computer to second analog signals, and analog mixing means for performing analog mixing between the first analog signals and the second analog signals, whereby speaker means produces sound based on the result of the analog mixing.

15. (Twice Amended) An audio system, comprising:

an audio device for producing first audio data in connection with at least one audio source,

external serial bus means, and

a personal computer, for [producing] creating second audio data and control data,

wherein the audio device further includes selection means for selecting one of the first audio data and the second audio data, signal processing means for performing signal processing on output of the selection means, adjustment

means for performing adjustment on the second audio data with respect to sampling parameters, digital mixing means for performing digital mixing between output of the signal processing means and output of the adjustment means, and digital-to-analog conversion means for converting result of the digital mixing to analog signals, and speaker means for producing the sound based on the analog signals.

21. (Amended) An audio system, comprising:

an audio device;

a computer for creating computer audio data and control data for operating the audio device;

data transmission means to allow communications between the computer and the audio device;

wherein said computer has output means for outputting the computer audio data and the control data to the audio device via the data transmission means,

while said audio device includes

a first system portion including selection means for selecting one of audio device audio data and the computer audio data, signal processing means for performing signal processing on output of the selection means, first digital-to-analog conversion means for converting output of the signal processing means to first analog signals,

a second system portion including second digital-to-analog conversion means for converting the computer audio data given from the personal computer

to second analog signals, and

analog mixing means for performing analog mixing between the first analog signals and the second analog signals.

22. (Amended) An audio device comprising:

at least one audio source;

an interface for inputting computer audio data created by and supplied from a computer;

audio processing means for processing audio source audio data provided by the audio source and the computer audio data from the computer wherein the audio device further includes selection means for selecting one of the audio source audio data and the computer audio data, signal processing means for performing signals processing on output of the selection means, first digital-to-analog conversion means for converting output of the signal processing means to first analog signals;

analog mixing means for performing mixing between the first analog signals and the computer audio data which is input thereto via the interface.

23. (Amended) An audio device comprising:

input means for inputting audio source audio data supplied from an audio source different from a computer;

interface for inputting computer audio data created by and supplied from the computer;

selection means for selecting one of the audio source audio data and the computer audio data;

signal processing means for performing signal processing on output of the selection means;

first digital-to-analog conversion means for converting output of the signal processing means to first analog signals;

second digital-to-analog conversion means for converting the computer audio data from the personal computer to second analog signals,

analog mixing means for performing mixing between the first analog signals and the second analog signals; and

speaker means for producing sound based on output of the mixing means.

24. (New) An audio system, comprising:

a computer;

an audio device;

data communications means for allowing communications between the computer and the audio device, wherein

said computer includes means for outputting control data for controlling the audio device and for outputting audio data to the audio device via the data communications means,

means for displaying an operation panel for controlling the audio device,

means for outputting the control data to the audio device via the data communications means based on operation of the operation panel;

means for receiving information regarding operation of the operation panel via the data communications means as the control data, thus providing the control data to the operational panel; and

means for outputting the audio data to the audio device via the data communications means, wherein

said audio device includes mixing means for mixing the audio data supplied from the computer together with other audio data given from a different audio source.

25. (New) A control method for an audio device, comprising:

creating a graphic user interface for controlling the audio device to allow selection of an audio source with respect to an audio device and to allow mixing of audio data of the selected audio source together with other audio data created by a computer;

outputting control data to the audio device based on operation of the graphical user interface;

receiving information regarding operation of the graphical user interface as the control data, and providing the control data to the graphical user interface; and

outputting the audio data to the audio device.

26. (New) A program code storage device, comprising:

a machine-readable storage medium; and

machine-readable program code, stored on the machine-readable storage medium, the machine-readable program code having instructions to

create a graphic user interface for controlling the audio device, to allow selection of an audio source with respect to the audio device, and to allow mixing of audio data of the selected audio source together with other audio data given from a computer;

output control data to the audio device based on operation of the graphic user interface;

receive information regarding operation of the graphic user interface as the control data, and provide the control data to the graphic user interface; and

output the audio data to the audio device.

27. (New) The audio system of claim 1, wherein the data transmission means transmits digital data between the audio device and the computer, and the mixing means is a digital mixing means that performs digital mixing of the audio source audio data and the computer audio data.

28. (New) The audio system of claim 2, wherein the data transmission means transmits digital data between the audio device and the computer, and the mixing means is a digital mixing means that performs digital mixing of the audio source audio data and the computer audio data.

29. (New) The machine readable media of claim 11, wherein the mixing performed is digital mixing, the control data is output digitally via the external serial bus means, and the computer audio data is output digitally via the external serial bus means.

30. (New) The audio system of claim 12, wherein the audio data performs digital mixing of the first audio data and the second audio data.

31. (New) The audio system of claim 13, wherein the external serial bus means transmits the second audio data and the control data digitally.

32. (New) The audio system of claim 15, wherein the external serial bus means transmits the second audio data and the control data digitally.

33. (New) The audio system of claim 21, wherein the data transmission means transmits the computer audio data and the control data digitally to the audio device.

34. (New) The audio device of claim 22, wherein the interface for inputting computer audio data is a digital interface.

35. (New) The audio device of claim 23, wherein the interface for inputting computer audio data is a digital interface.

36. (New) The audio system of claim 24, wherein the data communications means allows digital communications between the computer and the audio device, and the mixing means is a digital mixing means for mixing the audio data supplied from the audio device and the second audio device supplied from the computer.